

REMARKS/ARGUMENTS

Claims 1-16 and 18-43 are pending in this application. By this Amendment, claims 1, 12-14, 18, 21, 22, 24, 31-33, 35, 39 and 41 are amended and claims 42 and 43 are added. The amendments and added claims introduce no new matter. Claim 17 is canceled without prejudice to or disclaimer of the subject matter recited in that claim. Reconsideration of the application based on the above amendments and the following remarks is respectfully requested.

Claim Objections

The Office Action objects to claims 12, 13, 31 and 32 for informalities, and provides suggestions to overcome the objections. Claims 12, 13, 31 and 32 are amended in accordance with the Examiner's suggestions. Withdrawal of the objections is respectfully requested.

Rejections Under 35 U.S.C. §112

The Office Action rejects claims 1-23 and 41 under 35 U.S.C. §112, and provides suggestions to overcome the rejections. Without conceding the propriety of the rejections, Applicants submit that the amendments to claims 1, 16, 18, 21, 22 and 41, and the cancellation of claim 17, overcome or render moot the various rejections under 35 U.S.C. §112.

Reconsideration and withdrawal of the rejections under 35 U.S.C. §112 are respectfully requested.

Rejections Under 35 U.S.C. §103

The Office Action rejects claims 1-4, 7-9, 12-29, and 31-41 under 35 U.S.C. §103(a) over U.S. Pat. No. 4,121,192 to Wilson ("Wilson") in view of U.S. Pat. No. 4,214,485 to Berger et al. ("Berger"); and rejects claims 5, 6, 10, 11, and 30 under 35 U.S.C. §103(a) over Wilson in view of Berger and at least one of U.S. Pat. App. Pub. No. 2002/0107649 to Takiguchi

et al. ("Takiguchi") and U.S. Pats. Nos. 5,831,937 to Weir et al. ("Weir") and 6,006,165 to Okada ("Okada"). These rejections are respectfully traversed.

Without conceding the interpretation of the applied references, or the propriety of the rejections, and solely to advance prosecution of this application, the independent claims are amended to clarify relevant features. The applied references cannot reasonably be considered to have suggested the combinations of features recited in the independent claims for at least the following reasons.

Claim 1 recites, in relevant part:

a sensor module configured to touch an upper surface of a floor,
the sensor module configured to detect at least one of floor acceleration,
floor vibration, and floor deflection and to provide acceleration, vibration,
and deflection signal, wherein the subject can walk on the upper surface of
the floor in proximity to said sensor module; and
a processor module that is configured to analyze the acceleration,
vibration, and deflection signal and to determine gait characteristics based
on the signal,
wherein, the processor is configured to determine the gait
characteristics based on the signal from a single sensor module.

Claims 24 and 41 recite similar features.

Wilson relates to a system for determining position and velocity of an intruder from an array of sensors. *See, e.g.*, Abstract, col. 1, lines 29-31, col. 3, lines 42-58, and claim 1 of Wilson. Wilson states that the sensors are typically implanted in the ground (see col. 2, line 29-32). Therefore, the Office Action relies on Berger as allegedly disclosing a seismic sensor that can be placed on the floor. However, the applied references, alone or in combination, would not have reasonably suggested the above combinations of features, at least because the applied references do not disclose a processor that analyzes the acceleration, vibration, and deflection signal for determining gait characteristics, and is configured to determine the gait characteristics based on the signal from a single sensor module. For example, as indicated above Wilson is very specific regarding its method of operation using an array of sensors in order to perform its calculations.

Applicants further submit that an attempt to modify Wilson to determine gait characteristics based on the signal from a single sensor module would not have been obvious

based on the evidence of record. For example, based on the totality of Wilson's disclosure, which exhaustively details the methodology of employing and controlling the array of sensors, it is apparent that the use of the array of sensors constitutes Wilson's principle of operation. Therefore, a modification that would determine gait characteristics based on the signal from a single sensor module would be contrary to Wilson's principle of operation, which would not have been obvious. MPEP §2143.01 VI.

The other references are not applied in a manner to overcome the above-identified shortfall in the application of Wilson to the subject matter of claims 1, 24 and 41. Accordingly, Applicants submit that at least 1, 24 and 41, and the claims depending therefrom, are allowable over the applied references.

Claims 14, 21, 33 and 39

Claims 14, 21, 33 and 39 variously recite features related to identifying the fall of a human body. The Office Action refers to Wilson and alleges that "gait characteristics include falls (an impact with the ground including a fall would be registered by the sensor; additionally, a foot impact is the foot falling to the ground)." However, Wilson does not teach, nor can it reasonably be considered to have suggested features such as the processor being configured to distinguish between steps of a human being and a fall of a human being, as recited in claim 14, or automatically identifying signals indicative of a human body falling to determine fall data, as recited in claim 39.

The other references are not applied in a manner to overcome this deficiency in Wilson. Additionally, Applicants submit that it would not have been obvious to have modified Wilson to have included such features at least because, for example, distinguishing between steps of a human being and a fall of a human being is not relevant to the objects of Wilson. That is, the intruder tracking system in Wilson would not have been obviously improved by modifying it to include such features.

Accordingly, Applicants respectfully submit that claims 14, 21, 33 and 39 would not have been reasonably suggested by the applied references.

Claims 2-13, 15, 16, 18-20, 22, 23, 25-32, 34-38 and 40 are likewise allowable for at least the respective dependence of these claims, directly or indirectly, on an allowable base claim, as well as for the separately patentable subject matter that each of these claims recites.

Claims 42 and 43

Claim 42 recites, in relevant part:

a sensor device comprising:
a housing configured to be placed on a floor surface
in a freestanding position; and
a sensor configured to:
touch the floor surface;
detect at least one of floor acceleration, floor
vibration, and floor deflection; and
generate a signal based on the detected at
least one of floor acceleration, floor vibration, and floor deflection;
a processor unit configured to communicate with the sensor
device and determine gait characteristics based on the signal, the
determined gait characteristics including identifying at least two of a
normal gait characteristic, an abnormal gait characteristic and a
human body fall; and
an output device configured to output the determined gait
characteristics, the output including different outputs for the at least
two of normal gait characteristic, abnormal gait characteristic and
human body fall.

The applied references would not have reasonably suggested the combination of features recited in claim 42 at least because the applied references, alone and in the combinations asserted by the Office Action, do not disclose or suggest a processor unit configured to communicate with the sensor device and determine gait characteristics based on the signal, the determined gait characteristics including identifying at least two of a normal gait characteristic, an abnormal gait characteristic and a human body fall; and an output device configured to output the determined gait characteristics, the output including different outputs for the at least two of normal gait characteristic, abnormal gait characteristic and human body fall.

Accordingly, claim 42 is believed to be allowable over the applied references.

Claim 43 is likewise allowable for its dependence on claim 42 as well as for the reasons discussed above with respect to claim 1.

Appl. No. 10/550,157
Amdt. dated April 17, 2009
Reply to Office Action of December 19, 2008

PATENT
Attorney Docket No. 21764L-001100US


CONCLUSION

In view of the foregoing, Applicants believe all claims now pending in this Application are in condition for allowance. The issuance of a formal Notice of Allowance at an early date is respectfully requested.

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 202-481-9900.

The Commissioner is authorized to charge any fees due or credit any overpayment to the deposit account of Townsend and Townsend and Crew LLP, Deposit Account No. 20- 1430.

Respectfully submitted,


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Attachment:
Petition for Extension of Time

Date: April 17, 2009

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